

Southern Pine Biomass Constituents

Branches-Twigs-Needles-Bark

Sample	Ash	Extractives	Acid-Insoluble Lignin	Soluble Lignin	Carbohydrates
Branches	0.4%	19.1%	27.3%	0.6%	52.7%
Twigs	1.3%	20.6%	32.6%	1.0%	44.4%
Needles	2.5%	26.5%	30.6%	2.1%	39.2%
Bark	0.8%	6.3%	51.0%	0.9%	40.8%

Sample	Sugars				
	Arabinan	Galactan	Glucan	Xylan	Mannan
Branches	2.6%	4.4%	34.1%	8.7%	7.2%
Twigs	4.6%	4.5%	27.1%	6.9%	5.0%
Needles	3.2%	2.7%	21.7%	2.7%	5.1%
Bark	2.3%	5.4%	16.2%	2.8%	2.5%

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